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DEVELOPMENT AND EVALUATION OF AN ORGANIZATIONAL  
STRUCTURE FOR MANAGED CARE  
AT DAVID GRANT USAF MEDICAL CENTER

A Graduate Management Project  
Submitted to the Faculty of  
Baylor University  
In Partial Fulfillment of the  
Requirements for the Degree  
of  
Master of Health Administration  
by Captain Michael S. Carlton, MSC  
20 July 1992

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Abstract

The Department of Defense, like many providers of medical care in the United States, is faced with controlling the cost of health care. DoD initiatives include the Civilian Health and medical Program for the Uniform Services (CHAMPUS) Reform Initiative (CRI), the Coordinated Care Program, and the Coordinated Care Support program, which will replace the CRI upon completion of the CRI demonstration. These programs will require the implementing military treatment facility to dedicate resources to an organized managed care function. David Grant USAF Medical Center (DGMC) has been tasked to implement managed care under more than one of the DoD initiatives, and therefore requires an organizational structure best suited to provide managed care under the guidelines of each program implemented. The purpose of this Graduate Management Project is to choose an organizational structure best suited for managed care at DGMC. The methods include a review of current literature and military operational guidance, design of alternative organizational structures, and an evaluation of those structures based on criteria developed from the literature review.

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## Introduction

The growing cost of medical care in the United States has led many providers of health care to implement methods to better manage the delivery of care. The Department of Defense (DoD) is not excluded from the effects of the rising cost of medical care in this country. The Air Force Surgeon General, Lieutenant General Alexander Sloan (1991), pointed out that in FY90, the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) cost accounted for 45% of the medical Operations and Maintenance (O&M) bill, and the figure is expected to grow at an alarming rate in the future, indicating the need for cost control measures. The mix of O&M and CHAMPUS care must be managed appropriately, taking into account the needs of the MTF and the cost of doing business in a manner to meet peacetime and wartime mission. The DoD initiatives to manage this task will be implemented as additional services performed at the Military Treatment Facility (MTF) level, thus requiring modifications to organizational structures and the need for this project.

The DoD has implemented more than one initiative to manage this task. An overview of those programs



related to this project are as follows:

(1) The CHAMPUS Reform Initiative (CRI), a demonstration project which has been operating in California and Hawaii since 1988. The CRI was undertaken by the DoD as a managed care approach to providing health care for CHAMPUS beneficiaries. The CRI is a risk sharing contract where the contractor is fiscally responsible for the medical care received by eligible CHAMPUS beneficiaries through civilian resources. The current contractor is Foundation Health Federal Services Inc. Fant and Pool (1990) provide a well defined overview of the key components of the CRI contract. Their report includes a three tier benefits package (which is likened to an HMO, PPO, and indemnity option), a comprehensive civilian provider network, claims processing, and utilization management for the CHAMPUS medical care provided to DoD beneficiaries.

(2) Coordinated Care Program (CCP). The CCP is a program initiated by the Assistant Secretary of Defense for Health Affairs (ASD(HA)) which is most similar to the Catchment Area Management (CAM) program described by Badgett (1990). Unlike the CRI, the CCP will require MTF commanders to be fiscally responsible for the civilian medical care received by eligible CHAMPUS

beneficiaries within their catchment areas. The CCP is designed to provide MTF commanders the tools, authority, and flexibility to maximize medical resource utilization while performing the health care mission (Mendez, 1992). The ASD(HA) CCP guidance (1992), identifies the major components of CCP as enrollment of beneficiaries, improved cost sharing incentives, primary care provider network, and improved utilization management and quality assurance programs.

(3) Coordinated Care Support (CCS) program. CCS is the name of the permanent program planned to replace the CRI contract when the demonstration is completed. The CCS was originally projected to begin August 1, 1993; however, program policy changes have delayed the contracting process to an undetermined future date. The CCS will also be a risk sharing contract for DoD beneficiaries. The contractor will be fiscally responsible for the medical care received by CHAMPUS beneficiaries who receive medical care through civilian sources. The CCS will function under the same basic principle as the CRI but with the provision for the MTF commander to have more decision authority regarding the type, amount and source of medical care.

The first effort made by USAF David Grant Medical Center (DGMC) to develop an organizational structure for managed care was the establishment of a Managed Care Office (MCO) within the Directorate of Patient Administration in June, 1991 (See Figure 1).

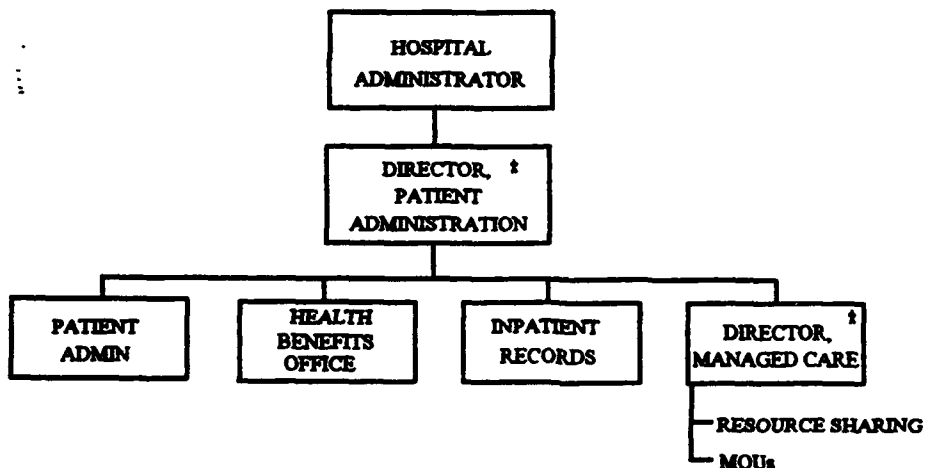


FIGURE 1

The MCO is staffed by 2 enlisted medical administrative technicians, and managed by the Director of Patient Administration - a Captain Medical Services Administrator. Currently the primary responsibility of the MCO is the management of resource sharing agreements held with Foundation Health Inc., to include cost benefit analysis, and auditing. To do this, the MCO must maintain close coordination with the Health Benefits Office (HBO), which is also managed within the

Directorate of Patient Administration. The HBO is responsible for the tracking of available services and management of patient referrals, including management of the alternative care program (referral of patients not disengaged from DGMC care, financed with DGMC O&M funds) and issuance of non-availability statements.

Conditions Which Prompted The Study

Because of its geographical location, and tertiary care status, DGMC has become involved in more than one of these initiatives:

(1) CRI: The CRI contractor is fiscally responsible for all CHAMPUS medical care received by DoD beneficiaries living in California and Hawaii. DGMC is located in California, and therefore, coordination between DGMC and the CRI contractor is necessary to provide the best mix of military and civilian medical care while maximizing MTF capacity.

(2) CCP: DGMC has been identified as an initial Air Force implementation site for the CCP. Although DGMC is considered to have already implemented the CCP by virtue of being a MTF located within the CRI, there is significant overlap regarding who is responsible for some patient population groups. Figure 2 displays that the largest segment of Dogmas population is the non-

enrolled CHAMPUS beneficiary. This group may seek care at DGMC on a space available basis or they may seek

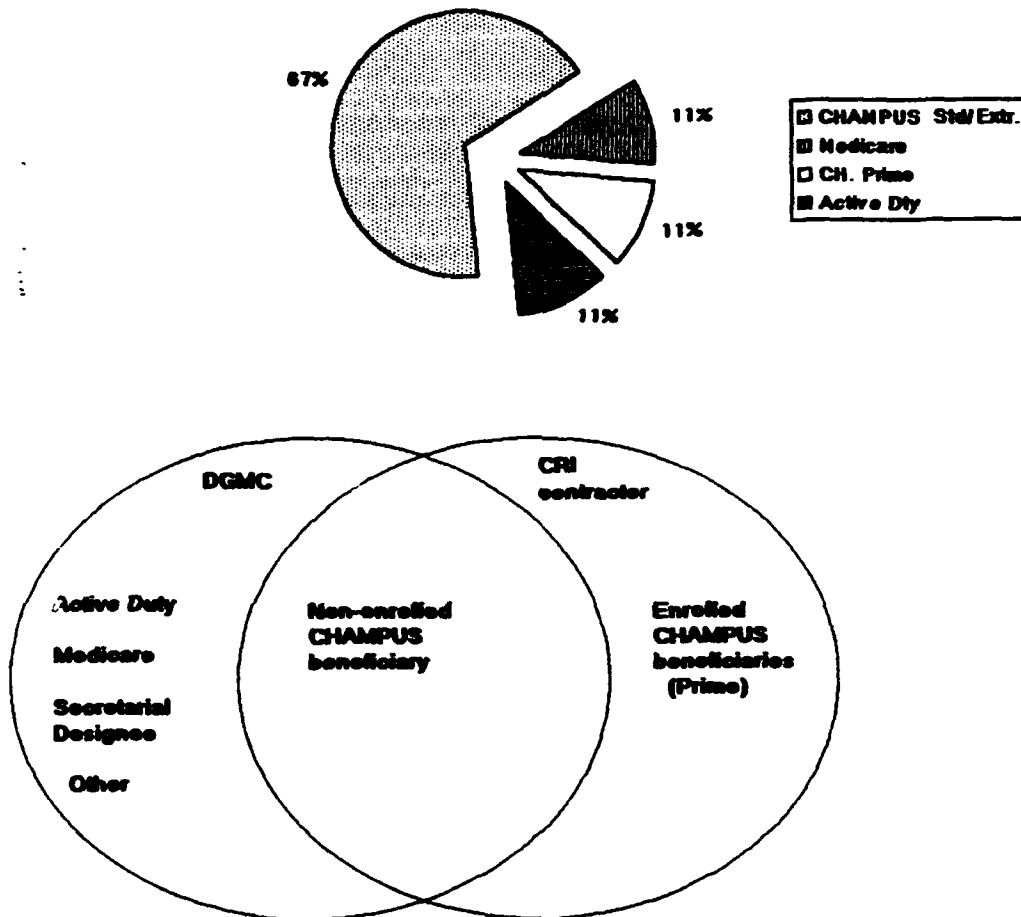


Figure 2

care downtown at standard CHAMPUS rates, or rates negotiated through the CHAMPUS Extra program. The point is that neither DGMC or the CRI contractor have the authority to manage the care of the largest population group. DGMC is responsible for all active

duty personnel and provides care to Medicare patients on a space available basis. The CRI contractor is fiscally responsible for all CHAMPUS beneficiaries and manages the care of those enrolled in the Prime program. Patients enrolled in the Prime program may, however, have the option to designate DGMC as their primary care physician. And when Prime patients receive care from a DGMC provider, CHAMPUS is not billed. Additionally, there are programs which do not overlap between DGMC and the CRI. For example, enrollment of active duty beneficiaries. This will require DGMC to implement such services beyond the framework of the CRI contract.

(3) The importance of DOGM's role in the future CCS cannot be overemphasized. The DGMC Commander will have more authority regarding the delivery of medical care within the catchment area. Base closures within the region (Fort Ord and the Presidio) would also indicate that DGMC will assume a greater leadership role in directing the health care for CHAMPUS beneficiaries in this region.

To meet the challenge of effectively managing its involvement in various managed care initiatives, an organizational structure is needed at DGMC which will

support all the components of these and future initiatives.

#### Statement of the Problem

DGMC has been tasked to implement managed care under the program guidance of the CCP, and due to its location in California, it must also operate under CRI guidelines. An organizational structure must be implemented to best provide managed care under both CCP and CRI guidelines, and be adaptable to future managed care initiatives.

#### Review of the Literature

The literature does not provide an answer for the best managed care organizational structure. Fueled by the rising cost of health care and the need to stay in business, several variations of managed care organizational structures have been developed. Although the literature does not identify the best organizational structure for managed care, it does support the idea of combining managed care functions within some type of organizational structure to oversee programs.

Support For Organizing Managed Care. Peter Boland, PhD, editor of the text "Making Managed Healthcare Work: A Practical Guide to Strategies and

Solutions", addresses management strategies from the viewpoint of a centralized office, established to manage and control the plan during and after implementation. Boland (1990) also discusses managed care in journal literature, supporting the notion that managed care works to combine services and technologies to affect price, volume, quality, and accountability of population benefits. Boland's remarks also suggest that organization of the essential aspects of managed care services can produce better health care at competitive prices if they are correctly assembled and implemented.

In Julie Johnsson's case study (1991), the benefits of consolidating the preadmission, concurrent review, and discharge planning departments into a single Office of Managed Care are described for a specific hospital. This design enhances appropriate resource consumption by allowing one department to oversee every facet of a patient's stay at the hospital.

Organizational Theory. Several sources are available within the literature relating to the ways in which health organizations are structured. Most texts cover the basic theories of organizational structure



with very little variation. Rakich, Longest & O'Donovan (1977) found an appropriate description of organizational literature with the following quote by March & Simon (1958). "The literature leaves one with the impression that, after all, not a great deal has been said about organizations, but it has been said over and over in a variety of languages."

The review of organizational theory is important because the organization chart will serve as the primary management tool used in this study to evaluate the proposed organizational structures. The organization chart displays the major functions, and their respective relationships and it shows where positions are located within these functions. It shows the channels for supervision, and the lines of authority and communication. The organization chart is used by managers to identify inconsistencies and complexities in the organizational structure. A manager can review such factors as the span of management, mixed lines of authority, and splintered authority.

A review of the literature addressing the formal arrangement of organizations is covered in the following paragraphs.

Classical organization theory, with beginnings that date back to the 1890 to 1940 time period (Rakich et al., 1977), embodies management principles still in existence in today's health care organizations. A review of these principles from several sources which relate to the design of an organizational structure are as follows: (Arnold & Feldman, 1986; Rakich et al., 1977; Veninga, 1982; Liebler, Levine & Dervitz, 1984).

- Division of work. This principle states that each member of the organization should have very clearly defined job duties, and that no two employees' job duties should overlap.

- Unity of command. This principle of management states that no member of an organization should be responsible to more than one superior.

- Scalar chain. All communication from the top of the organization must pass through each successive level of subordinates until it reaches the appropriate lower level. Likewise, all communication from the bottom of the organization must pass through each successive level on its way up the organization.

- Limited span of control. This principle deals with the number of subordinates who should report to a single supervisor. Generally, it was argued that the

ideal span of control is twenty for first-line managers, eight for middle managers, and four for executives. The logic behind these guidelines was that the more routine the work employees are doing, the less supervision they need and the more employees a manager can handle.

A typical organizational structure which follows the principles of classical management is the "functional organization", or a "vertical structure" (Arnold & Feldman, 1986; Rakich et al., 1977). A functional organization is one where employees are grouped together by a particular skill or function, such as a business function (See Figure 3).

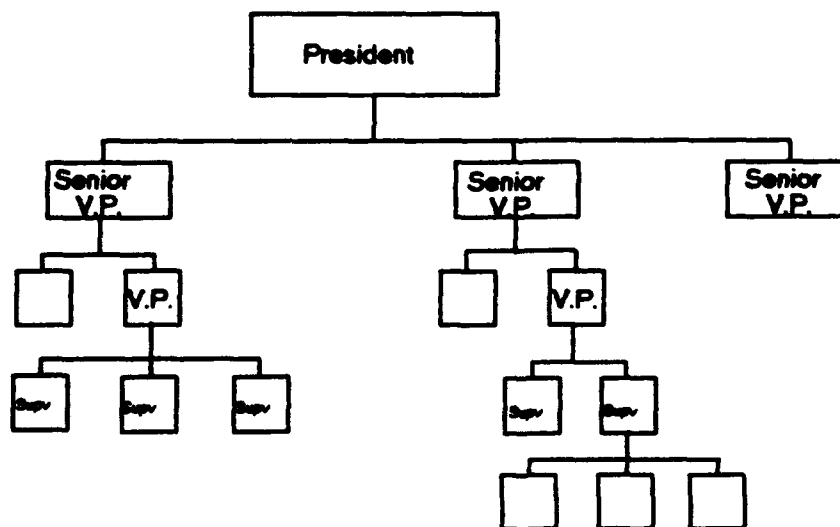


Figure 3

A horizontal organization (See Figure 4), which is sometimes referred to as a "flat" organization (Veninga, 1982), is also considered a functional organization, working within the principles of classical theory. Horizontal organizations differ from vertical organizations in that they have relatively fewer levels of management.

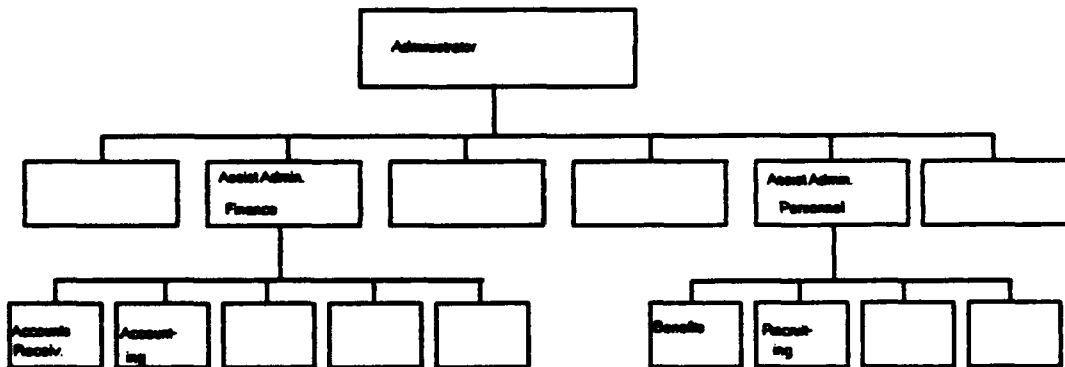


Figure 4

Arnold & Feldman (1986) list two key advantages of the functional structure.

- The functional structure supports and reinforces technical expertise. It facilitates sharing of technical knowledge and work experience as a result of grouping employees by skill or function.
- The functional structure allows some economies of scale, and reduces duplication of activities. For

example, it allows one office to perform personnel activities for the entire institution, as opposed to each department having someone responsible for personnel activities.

Arnold & Feldman (1986) also list the two major disadvantages of the functional structure.

- Functional groups may become competitive among themselves when the institution's resources are limited, or they may promote those programs which serve their best interest and not the interest of the institution as a whole.

- Coordination between functional groups becomes difficult when the task at hand is large and involves several of the functional groups. A good example of this would be the coordination required between the many functional groups of city governments when emergency response is needed for fires, floods, and accidents.

Another type of organizational theory that is gaining popularity in recent years is modern organizational theory. Modern organizational theories developed out of research efforts by organizational behaviorists such as listed by Rakich et al, (1977). The most common organizational structures based on

these theories are the divisional and Matrix structures.

The divisional organization structure (See Figure 5) is a means of grouping skilled employees and necessary resources to produce a product or to serve a specific type of customer or a separated geographic location.

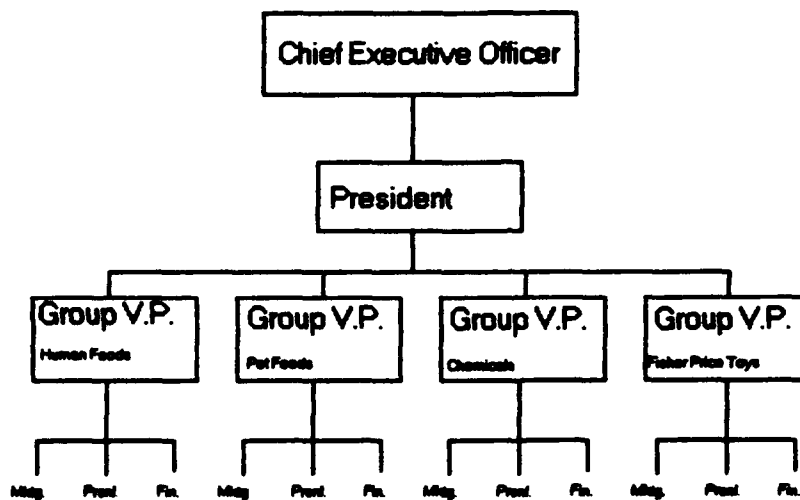


Figure 5

The Chevrolet component of General motors is a good example of a product division where the people, raw materials, and technology needed to produce a specific model are grouped together. Walmart is a good example of a geographical division, where resources are grouped geographically, to produce the same goods and services at different locations. Some companies

organize divisionally to serve different customer groups. AT&T has separate divisions for residential customers and commercial customers (Arnold & Feldman, 1986).

The advantages of the divisional structure are listed by Arnold & Feldman (1986).

- The divisional structure allows top management to delegate when decisions are too many to be handled.

Division managers are more knowledgeable about the customers and markets they serve.

- Division managers are made accountable for meeting production goals.

- Coordination of functions within each division is made easier because all the employees who are working on the same product are located in the same work unit and report to the same general manager.

The disadvantages of the divisional structures listed by Arnold & Feldman (1986) are as follows:

- It increases the difficulty in allocating the corporate staff to support each division.

- Economies of scale are lost because each division may be duplicating some of the activities of other divisions, such as sales forces.

- The autonomy associated with the divisional

structure encourages pursuit of their own goals, and hinders their achievement of overall corporate goals.

The matrix structure (See Figure 6) combines hierarchical (vertical) coordination through departmentalization and the formal chain of command with simultaneous lateral (horizontal) coordination across departments (Neuhauser, 1972). It is when project organization is superimposed on a functional organization that the matrix organization occurs (Rakich et al., 1977).

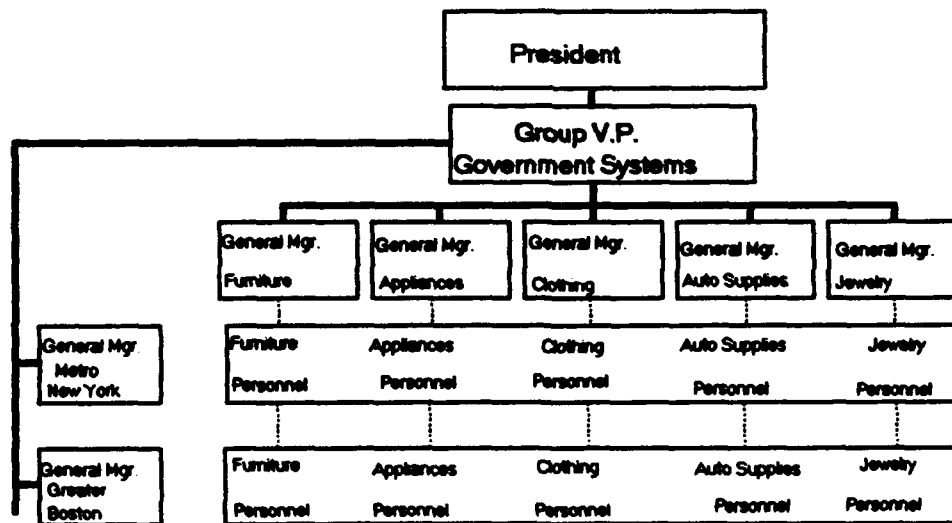


Figure 6

The advantages of the matrix structures are listed by Arnold & Feldman (1986) are as follows:

- It reinforces and broadens technical expertise.



Since employees are grouped by functional activity, they may share ideas and suggestions with their colleagues as well as with professionals in other areas.

- It facilitates efficient use of resources.

Because certain skills are needed at various stages of the project, underutilized staff may be shifted from project to project as needed, instead of being permanently assigned to each project.

The disadvantages of the matrix structure, as listed by Arnold & Feldman (1986) are as follows:

- The matrix design, with its overlapping areas of responsibility, encourages politicking for power and position among managers.
- Stress and confusion among employees is increased because they are working for two supervisors.
- Decision making in matrix organizations requires several meetings and coordination among several people.

Lateral relations is another method used by organizations to encourage coordination among different work units (Arnold & Feldman, 1986). The most commonly used methods of lateral relations are dotted-line supervision, liaison roles, temporary task forces, permanent teams, and integrating managers.

The above review of organizational theory provides a theoretical basis to assist in the design of potential organizational structures. Before the organization chart can be prepared, a list must be developed, containing all the major functions or components to be included in the chart (Liebler et al., 1984).

Components of Managed Care. The components of managed care are covered extremely well by military operational guidance. A significant amount of overlap, or duplication of information was found, as most sources covered the basic components. This is the result of lessons learned from earlier implementation projects. Several sources were reviewed to develop the list of components (ASD(HA), 1992; HQ USAF, 1992a; HQ USAF, 1992b; Bergstrom, 1989; Wright-Patterson, 1992)

Based on the above sources, a list of components has been developed, from which potential organizational structures can be designed. The list includes a brief description to establish familiarity with the component.

- Enrollment. This function will probably manage the enrollment of active duty personnel into the plan. The enrollment of all other beneficiaries (dependents

of active duty, retirees and their dependents, etc.) will be enrolled by the CRI/CCS contractor. Duties will include reporting from the enrollment database on figures such as total enrollment, new enrollees, disenrollees, etc.

- Eligibility verification. This function will verify the eligibility of beneficiaries seeking enrollment, requiring alternative care services, or in need of a non-availability statement (NAS),.

- Patient education. This function requires a detailed knowledge of eligibility regulations, and the policies and procedures associated with various benefit programs (CHAMPUS Prime, Extra and Standard CHAMPUS, Medicare, etc.). This function will provide broad educational services to beneficiaries regarding the various program options. This function will also provide individual counseling on benefits depending on status or program policies.

- Patient relations. This activity will manage a system to process grievances and complaints. It will also provide a patient questionnaire program and report the results.

- Claims processing. This function will manage the claims associated with alternative care and third party

programs. The CRI contractor is responsible for the management of CHAMPUS claims.

- **Market analysis.** This function will perform an internal needs assessment, comparing MTF utilization with CHAMPUS utilization, reviewing data on workload, productivity, etc. Additionally, some external analysis will be performed to identify health resources available within the local area.

- **Data management and planning.** This function will perform continuing analysis of information obtained from various sources such as enrollment, expenses, productivity, NAS, referrals, utilization, complaints, and audits. This function will forecast future needs and demands, to assist in accurate evaluation and effective planning for present and future managed care needs.

- **Audits.** This function is responsible for the verification of services rendered, and billed, to assure the financial viability of managed care negotiated arrangements. The audit function performs routine and special audits on all agreements. This function will also perform cost benefit analysis to determine the viability of potential agreements.

- **Referral management.** This function will track

the status of in-house capabilities to ensure the appropriate utilization of all in-house resources. It will also manage out-of-house alternative care referrals for specialty or diagnostic services to the most appropriate site. This function will maintain comprehensive provider network listings, issue non-availability statements, and validate supplemental care claims prior to payment. The CRI contractor is responsible for the management of CHAMPUS beneficiary referrals.

- Network management. This function will be responsible for marketing and recruitment of network providers. It will also manage agreements with network providers including memorandums of understanding, contract agreements, and resource sharing agreements with the CRI/CCS contractor and Veterans Administration (VA) facilities.

- Provider relations and education. This function will be responsible for responding to provider concerns, assisting providers with program procedures, and providing information regarding program policies to all area providers.

- Utilization review. This function will perform precertification by reviewing the appropriateness of

admissions or of procedures using pre-established criteria. It will perform concurrent review by evaluating the appropriateness and level of care or services. It will also perform retrospective review by validating the criteria given at time of precertification, and evaluating the appropriateness of discharge or any invasive procedure and DRG validation.

- Case management. This function will manage high risk cases identified through screening or referrals. It eliminates duplication of services while ensuring the most appropriate source for care (rehab, hospice, etc.) in a timely manner.

- Discharge planning. This function assists in formulating a discharge plan and coordinates/arranges for services to be available at time of discharge. It must utilize a system which identifies patients through screening or referrals.

- Health promotions. This function is responsible for marketing preventive medicine concepts. Health Promotions programs educate patients as to modifiable health risk, provide a variety of health screening services, and sponsor a broad selection of wellness classes that will educate beneficiaries and offer appropriate behavior modification.

Design of the Organizational Structure. No universally accepted theory about the design of health care organizations exist. Health care managers must select and adapt many different approaches and combine many theories from organizational design (Rakich, et al., 1977). In the same vein, a textbook approach to developing an organizational structure for managed care does not exist (Kongstvedt, 1989). How key personnel and reporting requirements fit into the organization depend on the many variables such as the size, type, ownership, and environment. Kongstvedt, also discusses key management positions identified as executive director/CEO (Administrator in USAF MTFs), medical director (Director of Hospital Services in USAF MTFs), and director of finance (Director of Resource Management in USAF MTFs).

The ASD(HA) policy guidelines on the DoD CCP (1992) includes a section titled "Organization of the Delivery of Health Care" which describes the MTF Commander's responsibility for health care cost, quality, and access in their service areas. The plan does not however, provide guidance on the internal organizational structure for the managed care services.

The Air Force Managed Care Plan (HQ USAF, 1992;1), only discusses Utilization Management (UM) in terms of organizational structure. The plan states that UM is viewed as a clinical function, and will most likely be organized within Hospital Services.

The MAC Plan (1992) does not provide specific guidance on what a managed care organization structure should be modeled after. The plan does provide certain characteristics or desired attributes which will be used as evaluation criteria in the section to following. The MAC plan empowers local MTF commanders to tailor their organizational structure for best results. It also encourages experimentation with different organizational models that increase teamwork and process, and reduce barriers caused by turf battles and stove-piping.

To get an understanding of how managed care is being organized in MTFs, it was necessary to review the concept of operations at those facilities currently implementing the ASD(HA) CCP. Most MTFs are organizing in a similar manner with small variances due to size or services required (See Figure 7).



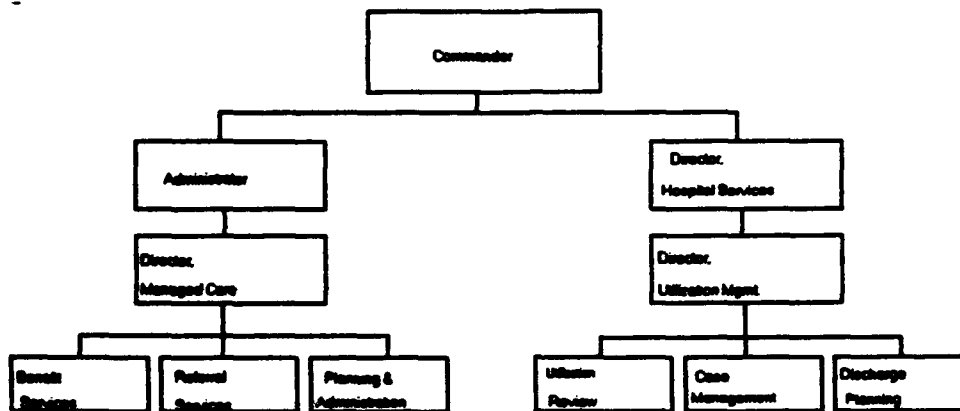


Figure 7

This design is a functional organization with the UM components organized under the Director of Hospital Services, and everything else (considered administrative) organized under the Hospital Administrator. The unique variations from this structure are as follows:

The 2d Medical Group at Barksdale AFB, Louisiana has separated the Retrospective Case Mix Analysis System (RCMAS) function from data analysis, and organized RCMAS under the Director (Chief) of Hospital Services (See Figure 8).

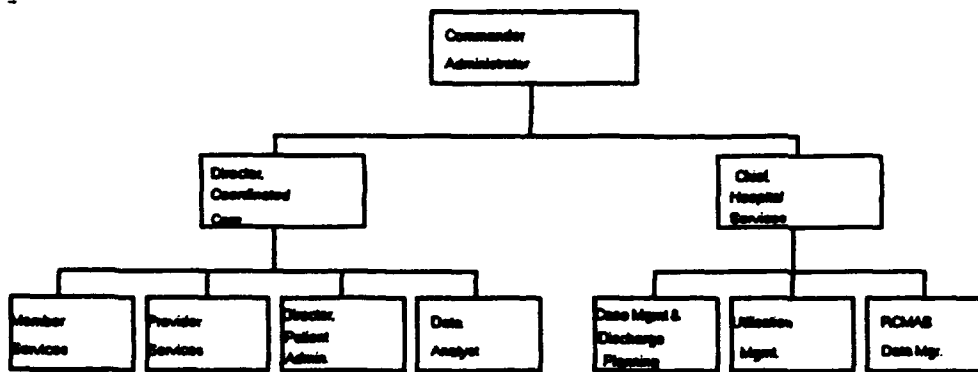


Figure 8

The 554th Medical Group at Nellis AFB, Nevada (554th Med. gp., 1992) organizes all functions under the Hospital Administrator including Utilization Management, (See Figure 9).

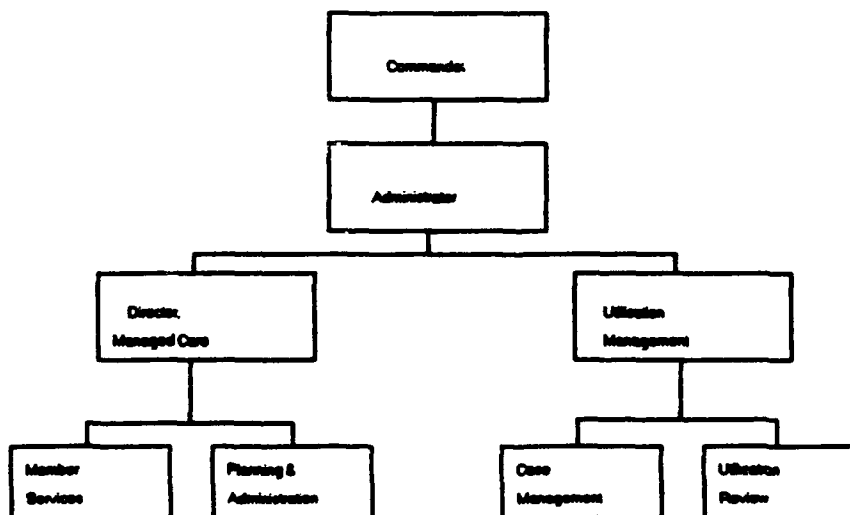


Figure 9

Wright-Patterson who also organizes all components of managed care under the Administrator, was the only organization found to be using a steering group as part of the managed care organization (Wright Patterson USAF Medical Center, 1992). The charter for this group is to guide and direct the development of a coordinated managed health care strategy. It is composed of a subset of the Executive Committee and is chaired by the Associate Administrator for Operations. It is responsible for oversight of the CCP implementation.

Evaluation Criteria. The evaluation criteria found in the literature focused mainly on quantifiable comparison of organizations. These criteria compared organizations on performance records such as financial viability, and productivity. The literature did hint at some general characteristics or traits desired in managed care structures. The managed care structure designed for Hermann Hospital in Julie Johnsson's case study (1991) was built to satisfy specific goals. These goals describe some desirable characteristics for an organizational structure. The goals included:

- To overcome the operational and departmental barriers to patient flow through the hospital
- To improve utilization patterns of the medical

staff and residents.

- To use medical resources more cost effectively and improve the hospital's financial performance while maintaining good patient outcomes.

The hospital reported that the efforts led to stabilization in operating performance and increased success in contract negotiations due to a better understanding of appropriateness of charges.

The majority of desired characteristics were identified through a review of DoD and USAF operational guidance. The DoD CCP (1992) provides guiding principles which point out the characteristics desired in the design and implementation of the program. The guiding principles:

- Serve beneficiaries to provide a combat ready force, enable DoD to retain a force capable of meeting its broad-ranging mission requirements and provide a health care benefit that meets its long-standing commitments to eligible beneficiaries. Toward these ends, the program must improve access to care, be understandable, and provide quality care.
- Are based on decentralized execution. Health care is a service that is best delivered locally. Consequently, MTF commanders must have the tools,

flexibility, and authority to make appropriate decisions about the delivery of care.

- Have local accountability with centralized direction and monitoring. MTF commanders will be accountable for the health care costs, quality, and access in their local delivery areas for all beneficiaries. This accountability will span both CHAMPUS and the direct care system. The system's performance will be monitored centrally by the Services and the ASD(HA).

- Achieve greater equity. The program should enhance access to high quality, cost-effective care and facilitate a uniform benefit for enrolled DoD beneficiaries. To the extent possible, differences in access, quality, cost and benefits should be minimized.

- Are flexible and easy to administer. To have decentralized execution, Military Health Services System (MHSS) managers must have the latitude to make management decisions about the delivery of health care networks. These decisions should be made with a view toward simplifying administration of the system for beneficiaries, providers, and MHSS managers. In service areas with an MTF, the MTF commander is the MHSS manager.

- Optimize use of MHSS resources. The MTF will be at the center of a network of health care providers. The MTF commander, through a primary care manager and/or health care finder, will direct patients to the MTF when the capacity and capability to deliver the care exists at the MTF. When care is not available at the MTF, patients will be referred to other network providers outside the MTF. This should optimize the use of MHSS resources and minimize out-of-pocket cost for beneficiaries.

The Air Force Surgeon General (USAF, 1991) also provided major principles to guide the design and implementation of managed care initiatives:

- Health care is a local issue best managed at the local level.
- The Air Force Managed Care Program must be clinically oriented.
- It must balance quality, access, and cost issues.
- The program acknowledges the role of readiness.
- Local management is responsible and accountable for providing or arranging for care.
- There will be "blue suit" management and control of all managed care activities.
- Managed care plans must include efficient and

effective use of MTF resources.

The MAC Managed Health Care Plan (1992) provides an annex which discusses "MTF Organization". The annex encourages organizational structures to be molded to best facilitate customer requirements and facility mission. It describes the need for organizations to be flexible to changing modes of health care delivery and to individual personnel management strengths. The annex also recommends local empowerment, process alignment, process ownership & linkage, process team building, and testing of product lines by members of the MTF executive management team.

In her case study, Johnsson (1991) also discusses two key aspects in the development of a managed care office.

- First it is essential that the house staff be partners in the change to managed care. It was also stressed to give clinicians, both physicians and nurses, control over the issue of reducing resource consumption.

- A second issue discussed the importance and role of the managed care office. Here, Johnsson describes the benefit of sensitivity and coordination when dealing with the hospital staff regarding the

management of patient care.

MacLeod (1989) also discusses the benefits of centralizing managed care functions. He stresses the importance of a central coordinating function for managed care, to open and maintain vertical and horizontal lines of communication.

Based on the literature review a preliminary list of desired attributes has been developed for the managed care organization structure:

1. Focus on the patient process.
2. Promote cross functional teamwork.
3. Provide easy access to customer service areas.
4. Flexible to change.
5. Flexible for growth.
6. Maximize resource utilization, (manpower, supplies, etc.)
7. Facilitate the MTF and managed care mission.
8. Maximize the use of management personnel.
9. Promote ownership of the process.

### Purpose

The purpose of this graduate management project is to choose an organizational structure best suited for managed care at DGMC. The many variables involved with implementing the CCP, combined with operating in the



CRI, drive the need to put an organizational structure in place which can manage local initiatives as well as provide direction to the CRI contractor, while continuing to meet other valid or required organizational objectives.

#### Methods and Procedures

The methods and procedures for this GMP consist of a literature review, identification of managed care components to be offered at DGMC, development of potential organizational structures, development of a list of desired attributes for the organizational structure, and an evaluation to determine the most appropriate structure.

#### Literature Review

The literature review serves as the foundation for the methods and procedures of this paper. It includes a search for related text, current literature, and military operational guidance. The literature review was performed to meet the following study objectives:

Develop a theoretical base from which organizational structures may be developed. Specific information on organizational designs and the benefits of those designs are the focus of this portion of the

literature review.

Identify components of managed care related to military medicine as well as those components recommended by operational guidance. Guidance on the type of services required to implement managed care in Air Force MTFs is the focus of this portion of the literature review. A list of components was developed during the literature review. The list of managed care components makes up the services which an organizational structure will be built around.

Identify existing organizational structures to assist in the development and evaluation of a structure for DGMC. Examples of how other MTFs are organizing the components of managed care is the focus of this portion of the literature review. The examples will provide models to assist in designing alternative organizational structures for managed care at DGMC.

Develop a list of desired attributes sought in an organizational structure to be used as decision criteria for evaluation of organizational structures. Identification of characteristic that would be desirable in a managed care organization is the focus of this portion of the literature review. This list of attributes will be provided to an evaluation panel made

up of members from the DGMC executive staff. Panel members were asked to participate based on their level of executive management, and functional expertise. The panel members will have the opportunity to add any desired attributes to the list. Next, the panel will rank order the ten most important attributes from the list, based on the importance of that attribute to an organizational structure. This process will be a blind vote having each panel member choose the ten attributes they felt are the most important, and ranking the chosen attributes from first to tenth based on level of importance.

The prioritized list of attributes will be given weights of 1 to 10 points, with the most important receiving 10 and the least important receiving 1. Next, the panel will evaluate the organizational designs against the final prioritized list of attributes. The process entails each panel member to rank all organizational structures, based on their opinions, as to how well they attain the desired attribute. Average rankings of each organizational structure as measured against each attribute will be multiplied against the weight assigned to that attribute. A final score will be summed for each

organization with the lowest score being the most desirable.

#### Development of Potential Organizations

Based on the information obtained in the literature review, potential managed care organizational structures have been developed to provide alternatives which can be evaluated by panel members. The literature review provided the theoretical basis for the development of the following proposed organizations. The organizational designs are an integration of organizational theory, and organizational structures currently in use throughout the Air Force Medical Service.

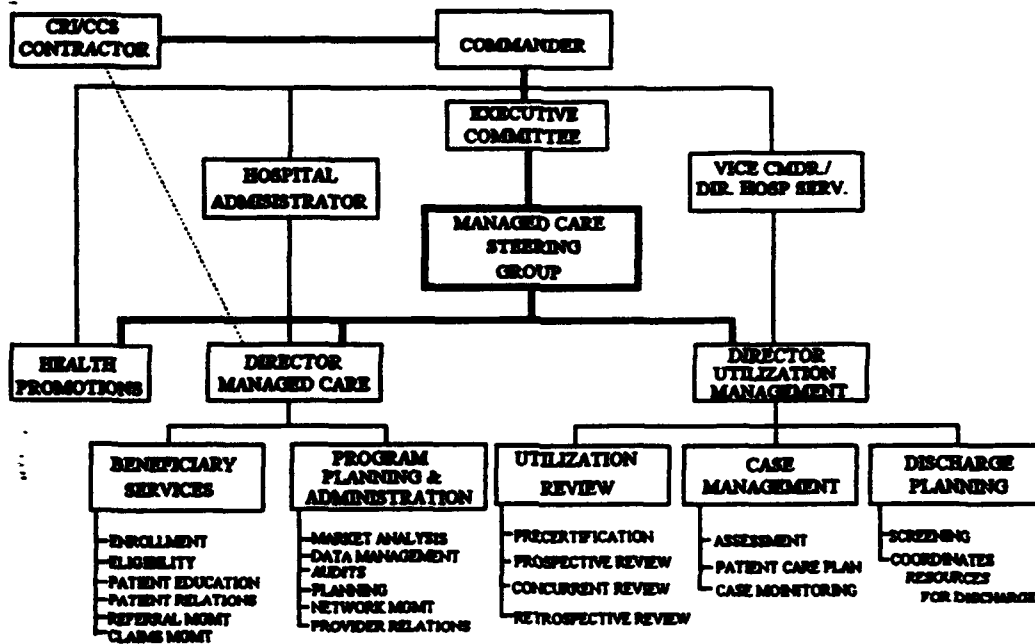
Factors such as manpower authorizations, changes in assigned personnel, the physical location of the managed care function, and the organizational culture are very important to organizational design and may result in modifications to the proposed structures. It is acknowledged that some variation of the designed structures may produce a more effective or efficient organization. However, for the purpose of evaluation, the basic organizational design will provide an accurate model.

At DGMC, the roles of the Vice Commander and the Director of Hospital Services overlap many responsibilities. For the purposes of this project, the Vice Commander and Director of Hospital Services will be included in the same organizational block, and their titles are interchangeable. The four potential structures designed for evaluation are described in the following paragraphs.

The vertical structure shown in Figure A organizes the administrative activities of managed care under the Hospital Administrator. The utilization management activities are organized under the Vice Commander/Director of Hospital Services

This model is based on the organizational designs from the Air Force Managed Care Project Officers' Guide (HQ USAF, 1992;2), which are presently used at most Air Force MTFs implementing managed care.

The administrative functions are organized into Benefit Services and Program Planning and Administration. Beneficiary Services is the focal point for all customer support activities related to managed care. They work closely with the gatekeeper function, and Health Care Finder Office (The Health Care Finder Office is the CRI contractor's referral



Structure A

focal points within the MTF). The responsibilities of this function include: management of the enrollment process and database; development of informational materials and counseling beneficiaries with accurate and adequate information related to managed care and program benefits; management of referrals within and between the direct and indirect care systems, including alternative care patients; validation of alternative care claims and management of patient concerns, complaints and/or inquiries regarding the managed care program. Program planning and Administration is the focal point for all managed care programs and the

resources supporting the programs. This function will perform market research necessary for strategic planning, development of new programs and services. It utilizes multiple information sources to provide analysis of the internal and external environment. It is responsible for developing all promotional and training materials related to managed care operations. It negotiates agreements with external civilian providers to treat alternative care patients or resource sharing agreements with the CRI contractor.

The Utilization Management (UM) functions are organized into three areas consisting of utilization review, case management, and discharge planning. The Utilization Review function monitors and evaluates the utilization of services provided by the MTF to ensure the services are necessary and appropriate. The three major processes involved in utilization review are precertification, concurrent review, and retrospective review. Precertification addresses the appropriateness of the admission or referral against preestablished criteria. Concurrent review monitors patient charts to assess the level of care and retrospective review validates precertification, performs generic quality screens, on discharges, invasive procedures, and DRG

validation.

Case management will work closely with the medical team to identify and coordinate the services enhancing the patient's recovery. These services range from medical to social and financial. Case management will strive to eliminate duplicate services while ensuring timely and appropriate services.

Discharge planning also works closely with the medical team to formulate a discharge plan. It arranges and coordinates needed services, ensuring quality care is efficiently provided at the time of discharge.

All managed care activities follow the direction of the managed care steering group. This relationship is depicted by the darker lines in the organization chart. The steering group will guide and direct the development of the managed health care strategy for DGMC. The steering group is composed of a subset of the Executive Committee.

A Line of lateral coordination and communication exists between the Vice Commander/Director of Hospital Services and the Director of Managed Care. The role of utilization management in managed care is to ensure patients receive timely, appropriate, and coordinated

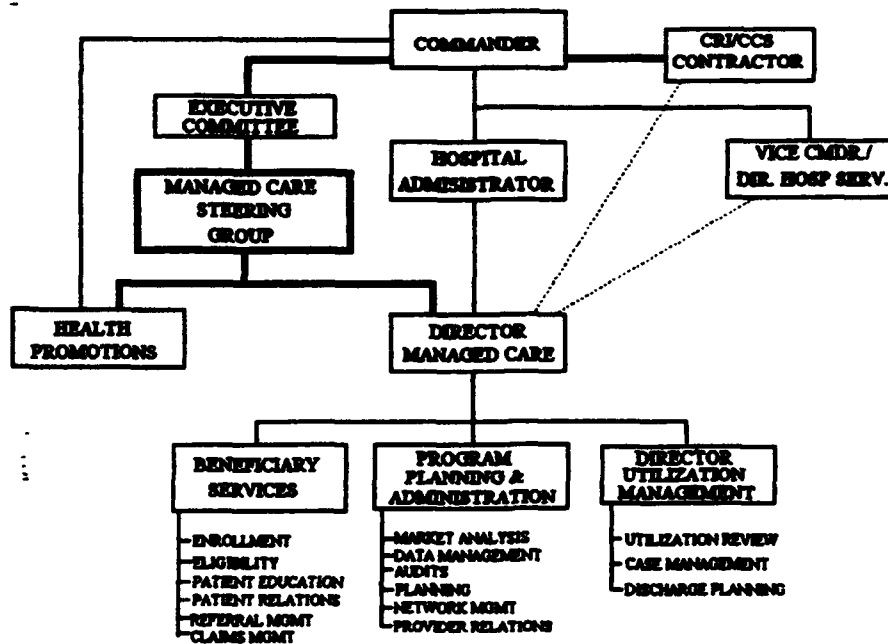


health care services to maximize patient outcome as well as maximize resource utilization. In short, clinical decisions must be tied into the business decision process. This lateral line will assist policy development and facilitate appropriate communication, coordination and interaction among the medical staff.

In this model, the Hospital Commander will also coordinate the needs of DGMC with the CRI/CCS contractor, to ensure the contractor provides support which compliments the MTF's efforts. A second lateral line of communication exists between the Director of Managed Care and the CRI/CCS contractor. This should facilitate communication at the operational level between both organizations.

The model at figure B is based on the organizational concept of the managed care function at Nellis AFB Hospital and Wright-Patterson Medical Center. It is a vertical structure similar to Figure A except that Utilization Management is organized under the Hospital Administrator.

Although UM is considered a clinical function, it's major objective is to integrate appropriate quality care with appropriate utilization of resources, and combine clinical judgment with good business sense.



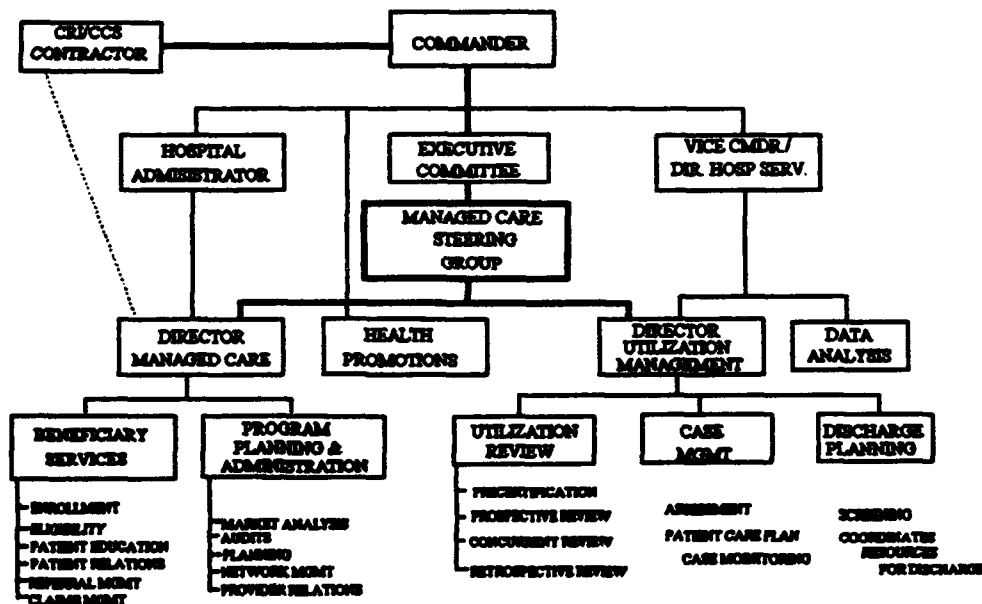
Structure B

The data and analysis of data supporting such decisions is the responsibility of hospital administration. This model promotes coordination and economies of scale by co-locating the UM function within the managed care directorate. The steering group will provide the same oversight as stated for Figure A, and the same lateral lines of coordination and communication exist between the Vice Commander/Director of Hospital Services and the Director of Managed Care

The model at figure C is a vertical structure similar to Figure A except that the data analysis function is organized under the Vice Commander/Director

of Hospital Services to support Utilization Management.

As stated above, the major objective of UM is to integrate appropriate quality care with appropriate utilization of resources, and combine clinical judgment with good business sense. This model gives the responsibility for the "business affected clinical decision" to physician management. The steering group will provide the same oversight as stated for Figure A.



Structure C

The lateral line of coordination between the Vice Commander/Director of Hospital Services and the Director of Managed Care is replaced by organizing the administrative function (Data Analysis) under the Vice

The matrix structure at Figure D would allow Managed Care to be organized into a smaller function. This would benefit when manpower resources are inadequate to staff a full-scale managed care organization. The structure uses existing departments/services to provide the resources and support necessary to administer managed care operations. Departments are organized functionally by



technical expertise; however, in this model, lines of responsibility and communication transgress the functional organizational lines, to show all departmental areas which participate in a given process.

Physicians or other providers may play an important role in a process; however, they are not organized functionally as physicians or providers, but functionally by department or service. This organizational structure indicates when involvement by an individual department or service is needed for the process. Depending on the process, the department/service participation may be administrative in nature, or it may require clinical expertise from a physician or other provider.

The filled-in circle indicates the process owner. By looking at the enrollment process (first), it is shown that the managed care function is the process owner, however, medical information systems provides DEERS and data base support. The Health Benefits Office within Patient Administration may perform the DEERS inquiry and enroll the member. Ambulatory Services provides guidance on the availability of Primary Care Providers for assignment of a gatekeeper.

In the Patient Education process, the Health Benefits Advisor is the process owner. Managed Care and Health Promotions provide support in terms of policy guidance and information.

The matrix structure provides more authority to the steering group than in previous models. The steering group plays a larger role in the development and oversight of the processes involved with Managed Care.

#### Evaluation of Proposed Organizations

To begin the evaluation process, a panel was formed to perform the rank order the desired attributes and evaluate the proposed organization structures against the attributes. The final panel included a balance of executive staff members from administrative areas and clinical areas, and an administrative resident from Xavier University, who was asked to participate based on current knowledge gained from graduate education. The panel consisted of the following:

1. Vice Commander
2. Hospital Administrator
3. Associate Administrator
4. Director of Ambulatory Services

5. Administrative Resident, Xavier University MHA program

The Administrator and Associate Administrator provide the administrative balance, while the Vice Commander and the Director of Ambulatory Services provide the clinical balance. The administrative resident provides a current knowledge base of organizational theory as well 14 years of Air Force experience.

The development of a comprehensive list of desired attributes is the first step in the evaluation process. Panel members were provided the preliminary list and given the opportunity to add any desired attributes to the list. The following list includes the input from panel members:

1. Focus on the patient process.
2. Promote cross functional teamwork.
3. Provide easy access to customer service areas.
4. Flexible to change.
5. Flexible for growth.
6. Maximize resource utilization, (manpower, supplies, etc.)
7. Facilitate the MTF and managed care mission.
8. Maximize the use of management personnel.

9. Promote ownership of the process.
10. Facilitate continuous healthcare improvement culture.
11. Encourages the empowerment of the workforce.
12. Facilitates communication, interface or linkage with existing organizational entities.
13. Encourages provider participation in managed care including responsibility for resource utilization.
14. Enable assessment of quality of care provided/arranged.
15. Integrates key organizational functions.
16. Identify responsibility and promote accountability for outcome.
17. Link clinical and business aspects.
18. Provide appropriate executive committee oversight.
19. Clearly defined job duties (Division of work).
20. Clearly defined lines of supervision (Unity of command).
21. Appropriate limits to span of control (Number of activities reporting to a specific function/position).
22. Facilitate a working relationship with the CRI/CCS contractor.



Next, the panel was asked to rank order the ten most important attributes from the list, based on the importance of that attribute to an organizational structure. This process consisted of each panel member choosing the ten attributes they felt were the most important, and ranking the chosen attributes from first to tenth based on level of importance.

As a result of the group process, it was determined that all of the attributes were of some value and should be used in evaluation of the structures. It was suggested and approved by the panel to deviate from the original process, which would eliminate some of the attributes, and group all attributes into similar categories, and use those categories as criteria for evaluation.

The list of desired attributes were grouped into related categories, and presented to the panel for discussion and final grouping. The process resulted in the desired attributes being grouped into nine different groups. The following list of desired attributes is the result of the grouping process. The organizational structure should:

1. Facilitate continuous healthcare improvement. It should focus on the patient process; provide easy access to customer service areas; facilitate/encourage empowerment of the workforce.

2. Be flexible to change and growth.

3. Promote cross-functional teamwork. It should integrate key organizational functions; link clinical and business aspects; facilitate communication, interface and linkage with existing organizational entities; encourage provider participation in managed care including responsibility for resource utilization.

4. Maximize resource utilization. This includes manpower; supplies; facilities; etc.

5. Facilitate the MTF and managed care mission.

6. Promote ownership of the process. It should identify responsibilities and promote accountability for outcome, with appropriate lines of supervision, and span of control.

7. Facilitate assessment of quality of care provided or arranged.

8. Provide appropriate executive oversight.

9. Facilitate a working relationship with the CRI contractor.

Next, panel members were asked to rank order the list of nine desired attributes using a nominal group technique, modified from the rank order prioritization process outlined by Seymour & Bradburn (1982). The panel members ranked each attribute from first to ninth. The average ranking of each attribute was computed, to provide an overall ranking for the attributes. The results of the rank order process are shown in table 1 below.

Table 1 DESIRED ORG. ATTRIBUTES	Panel Member					Avg	Range	Rank
	1	2	3	4	5			
1. Facilitate continuous healthcare improvement.	4	2	5	3	5	3.8	2-5	3rd/ 4th
2. Be flexible to change and growth.	2	7	9	6	6	6.0	2-9	6th
3. Promote cross-functional teamwork.	5	5	2	2	1	3.0	1-5	2nd
4. Maximize resource utilization.	3	4	4	4	4	3.8	3-4	3rd/ 4th
5. Facilitate the MTF and managed care mission.	1	1	1	1	2	1.2	1-2	1st
6. Promote ownership of the process.	6	8	3	5	3	5.0	3-8	5th
7. Facilitate assessment of quality of care provided for or arranged.	7	3	6	7	9	6.4	3-9	7th
8. Provide appropriate executive oversight.	8	9	8	8	8	8.2	8-9	9th
9. Facilitate a working relationship with the CRI contractor.	9	6	7	9	7	7.6	6-9	8th

Note: Ranking is based on highest average ranking (lowest average score).

The attribute with the highest average ranking, (with 1 the highest and 9 the lowest), was ranked first, and so

on. The range of rankings for each attribute is shown to provide some insight as to the level of agreement among panel members regarding the importance of each attribute. When considering the range, however, each individual ranking must also be considered, to identify outliers that increase the range.

Next, each criteria was given a weight in accordance with its level of importance, as determined in the rank order process. The attribute ranked first is worth nine points, the attribute ranked second is worth eight points, and so on. Because of a tie between the third and fourth attributes, the weights for those groups were combined and divided equally. This makes the attributes ranked third and fourth worth 6.5 points each. The fifth attribute is worth five points, and so on.

Next, panel members were asked to evaluate each alternative organization described earlier against the prioritized criteria. Panel members were provided a package identical to the "development of potential organizations" section from this paper, and a scoring sheet which listed the prioritized attributes. Then panel members were asked to rank each organizational structures first through fourth according to which

design best met each desired attribute.

The average rankings were computed, and multiplied against the weight assigned to each attribute. This provides each structure with a score for how well it is expected to meet each desired attribute. The lower the score, the more desirable the organization. The attribute scores for each structure were then added to provide a total score for each proposed organization.

### Results

Feedback from panel members expressed concern that desired attributes eight and nine, were difficult to quantify because each structure was similar with regards to the relationship with the CRI contractor and executive oversight. One panel member did not rank the structures against the last two desired attributes. The results of the evaluation would not be changed if desired attributes eight and nine were removed from the list. The results of the evaluation are shown in tables 2 through 5 on the following pages. The tables display the attributes in the final rank order as calculated in table 1. The weight assigned earlier to each attribute, based on its final ranking, is shown as a multiplier in the tables.

Table 2 Organization Structure A		Panel Number							
RANK	Desired Attributes	1	2	3	4	5	avg	mult	Score
1st	Facilitate the MTP mission.	2	4	2	3	4	4.8	9	16.2
2nd	Promote cross-functional teamwork.	3	2	1	3	2	2.2	8	17.6
3rd/ 4th	Facilitate continuous healthcare improvement.	4	2	2	3	2	2.6	6.5	16.9
3rd/ 4th	Maximize resource utilization.	4	1	2	2	4	2.0	6.5	13.0
5th	Promote ownership of the process.	2	1	2	3	1	1.8	5	9.0
6th	Be flexible to change and growth.	3	2	1	3	2	2.2	4	8.8
7th	Facilitate assessment of quality of care provided or arranged.	2	1	2	3	1	1.8	3	5.4
8th	Facilitate a working relationship with the CRI contractor.	0	1	2	4	2	1.8	2	3.6
9th	Provide appropriate executive oversight.	0	1	2	4	3	2.0	1	2.0
		TOTAL SCORE					92.5		

Table 3 Organizational Structure B		Panel Number							
RANK	Desired Attributes	1	2	3	4	5	avg	mult	Score
1st	Facilitate the MTP mission.	4	3	1	4	2	2.8	9	25.2
2nd	Promote cross-functional teamwork.	4	3	3	4	4	3.6	8	28.8
3rd/ 4th	Facilitate continuous healthcare improvement.	3	3	1	4	4	3.0	6.5	19.5
3rd/ 4th	Maximize resource utilization.	2	3	1	4	3	2.6	6.5	16.9
5th	Promote ownership of the process.	3	4	1	4	2	2.8	5	14.0
6th	Be flexible to change and growth.	4	3	3	4	4	3.6	4	14.4
7th	Facilitate assessment of quality of care provided or arranged.	4	4	3	4	2	3.4	3	10.2
8th	Facilitate a working relationship with the CRI contractor.	0	3	1	3	1	1.6	2	3.2
9th	Provide appropriate executive oversight.	0	3	4	3	2	2.4	1	2.4
		TOTAL SCORE					134.2		

Table 4 Organizational Structure C		Panel Member					Avg	Wgt	Score
RANK	Desired Attributes	1	2	3	4	5			
1st	Facilitate the MTF mission.	1	4	3	2	3	2.6	9	23.4
2nd	Promote cross-functional teamwork.	2	4	2	2	3	2.6	8	20.8
3rd/ 4th	Facilitate continuous healthcare improvement.	2	4	3	2	3	2.8	6.5	18.2
3rd/ 4th	Maximize resource utilization.	3	4	3	1	4	3.0	6.5	19.5
5th	Promote ownership of the process.	1	3	3	2	3	2.4	5	12.0
6th	Be flexible to change and growth.	2	4	4	2	3	3.0	4	12.0
7th	Facilitate assessment of quality of care provided or arranged.	1	3	1	1	3	1.8	3	5.4
8th	Facilitate a working relationship with the CRI contractor.	0	4	3	1	3	2.2	2	4.4
9th	Provide appropriate executive oversight.	0	4	3	2	4	2.6	1	2.6
TOTAL SCORE							118.3		

Table 5 Organization Structure D		Panel Member					Avg	Wgt	Score
RANK	Desired Attributes	1	2	3	4	5			
1st	Facilitate the MTF mission.	3	2	4	1	4	2.8	9	25.2
2nd	Promote cross-functional teamwork.	1	1	4	1	1	1.6	8	12.8
3rd/ 4th	Facilitate continuous healthcare improvement.	1	1	4	1	1	1.6	6.5	10.4
3rd/ 4th	Maximize resource utilization.	1	2	4	3	2	2.4	6.5	15.6
5th	Promote ownership of the process.	4	2	4	1	4	3.0	5	15.0
6th	Be flexible to change and growth.	1	1	2	1	1	1.2	4	4.8
7th	Facilitate assessment of quality of care provided or arranged.	3	2	4	2	4	3.0	3	9.0
8th	Facilitate a working relationship with the CRI contractor.	0	2	4	2	4	2.4	2	4.8
9th	Provide appropriate executive oversight.	0	2	1	1	1	1.0	1	1.0
TOTAL SCORE							98.6		

### Discussion

As stated earlier, evaluation methods for determining the design of organizational structures were not found in the literature. Structures within the MTF are typically designed based on the opinions of the manager. Using a panel of executive managers to establish a prioritized list of desired attributes, and to evaluate alternative structures is an attempt to integrate a decision making model into the process of designing an organizational structure for implementation. The combined experience of the panel members provides validity to the process of heuristically designing and implementing an organizational structure.

During the calculation of the results from the evaluation, a distinguishable pattern was not observed. In fact, 14 of the 36 rankings (4 structures x 9 criteria) ranged from first to fourth, showing significant variation among the panel rankings. The variation in rankings for structure A was the least, and did not exceed an average of 2.6 for any given criteria. The variation was minimal for structure A if the last two criteria are not considered.



Only 6.1 points separated structures A and D. It would appear that such a small difference would suggest that either structure is acceptable in meeting the desired characteristics. A closer look at the final ranking for each desired attribute shows that structure A ranked either first or second for every desired attribute, with an average ranking of 1.6 among the organizations. Structure D ranked from first to fourth in meeting each desired attribute, with an average ranking of 2.27 among the organizations, almost twice the average ranking of structure A.

Another point of validity for the evaluation is the fact that structure A was ranked significantly higher than all other structures in meeting the number one desired attribute - to facilitate the MTF mission. Additionally, during the prioritization of the desired attributes, this attribute was ranked first by four of the five panel members, and second by the fifth panel member.

Structure A was considered to best facilitate the MTF mission, receiving two first place rankings, and two second place rankings. Structure C was ranked second in facilitating the MTF mission. Both structures divide the managed care responsibilities

identically, with the only exception being the data analysis included under Hospital Services in Structure C. Locating the data analysis department with hospital services could be viewed as a fragmentation of the Program Planning and Administration function. Such a fragmentation, confuses lines of authority and span of control among functional groups, and could encourage competition, and turf building, which may be the reason for the difference in rankings.

Not surprisingly, Structure D was ranked first in meeting the desired attribute of promoting cross-functional teamwork. The matrix structure demands communication, and cooperation among departments in order to accomplish the task at hand. Structure A ranks a close second in promoting cross-functional teamwork. This is probably the result of the lateral lines of coordination between the Director of Hospital Services and the Director of Managed Care.

Structure D also ranks first in facilitating continuous healthcare improvement. Matrix organizations are designed around the process of each task at hand, which is key to the process improvement philosophy of continuous healthcare improvement. Structure D is considered significantly better than the

other structures toward meeting this desired attribute.

Structure A narrowly ranks better than structure D in meeting the attribute of maximizing resource utilization. However, two of the panel members ranked structure A first and two ranked it second in this category. One panel member ranked structure A fourth which contributes to the narrow score between structure A and D.

Structure A also ranked first in meeting the desired attribute of promoting ownership of the process, while structure C ranked second. This analysis is similar to the analysis for the number one desired attribute - to facilitate the MTF mission - and the same conclusion can be made.

Structure D was considered to be most flexible to change and growth with structure A ranked second in this category. This could be attributed to the nature of the matrix design. Communication and coordination are advantages of the matrix structure and two of the most important facilitators of change and growth.

Structure A and C are ranked equally in meeting the attribute of facilitating assessment of quality of care provided or arranged. Quality of care is primarily considered a clinical function. Both

organized the clinical aspects of managed care identically, under the Director of Hospital Services. This ranking is considered another point of validity and reliability in that both structures were ranked equally.

#### Conclusions and Recommendations

Based on the analysis of the evaluation, the organizational structure best designed to meet the desired characteristics and facilitate the implementation of managed care at DGMC is structure A. The working group provides the mechanism for cross functional teamwork, but still allows the traditional lines of authority and span of control to remain intact. While many healthcare organizations are moving away from such well defined lines of authority, military healthcare organizations may require such structures to ensure the organization is prepared for a much broader mission - war.

One of the advantages that is expected from this study should be realized during the implementation of the managed care organization. The barriers to implementation that usually result from turf battles and stove-piping should be minimized as a result of the panel process. Executive management buy-in should be a

result of participation in the development of desired attributes and the evaluation process.

It is recommended that DGMC implement managed care based on organizational structure A. Modifications to the design may be necessary to best fit the structure to the requirements of DGMC.

Sub-groups within the managed care working group may be necessary to plan for specific programs such as enrollment, and resource sharing agreements. Lateral lines of coordination may be necessary in areas where manning is not sufficient. For example, a lateral line of coordination between Program Planning & Administration and Resource Management may be necessary to provide data analysis support.

The Managed Care Working group should be involved with all aspects of the implementation.

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